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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Stephane Schaal

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EXAMINER

WYROZEBSKI LEE, KATARZYNA I

ART UNIT

PAPER NUMBER

1796

MAIL DATE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/509,851	Applicant(s) SCHAAL ET AL.	
	Examiner Katarzyna Wyrozewski	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 45-88 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 45-88 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/12/08</u> . | 6) <input type="checkbox"/> Other: _____ |

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In view of applicant's response, dated 8/12/2008 following office action is final as necessitated by amendment. Applicants have amended claims 45, 51, 66, 71, 77 and 82. The applicants have also submitted IDS citing a reference. Since the IDS was received after first office action and it is not a result of search conducted by the foreign office, the prior art recited therein may be utilized in a rejection while finality of the office action is maintained.

Applicant's arguments have been considered but not found as persuasive. All rejections of record are incorporated here by reference and applicant's arguments will be addressed.

Amendments incorporated into the claims are fully supported by the originally filed claims.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 77-86, 88 are rejected under 35 U.S.C. 102(b) as being anticipated by SHIBAHARA (US 5,246,994) as provided by the applicants.

The prior art of SHIBAHARA discloses composition comprising following (Abstract):

100 pbw of diene rubber

10-100 pbw of carboxylic acid salt, preferably zinc methacrylate (col. 2, lines 63-64)

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0.5-20 pbw of fatty acid amide (col. 3, lines 41-50)

A reinforcing filler (col. 3, lines 60-65) comprising carbon black or silica,

5 pbw of zinc oxide,

Peroxide x-linking agent.

In the light of the above disclosure, SHIBAHARA anticipates claims rejected above.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 45-88 are rejected under 35 U.S.C. 103(a) as being unpatentable over EZAWA (US 2002/0177641) in view of NAKAMURA (US 6,333,375).

The discussion of the disclosures of EZAWA and NAKAMURA from paragraph 4 of the office action dated 4/21/08 are incorporated here by reference.

Response to Applicant's Arguments

The examiner would like to clarify, that the rejection over record is EZAWA in view of NAKAMURA and vice versa. The prior art of NAKAMURA is utilized to provide specific

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teachings lacking in EZAWA and not the entire invention. The applicants appear to be arguing NAKAMURA in view of EZAWA, which not correct and does not address examiner's grounds of rejection.

a) The applicants argued that NAKAMURA is silent with respect to the tire tread band and elastomeric composition of the instant invention

As examiner pointed out this is a secondary reference and it is utilized to provide for specifically fatty acid salt or zinc stearate. Discussion of tires in NAKAMURA can be found in col. 1 of the prior art, which would further suggest that the teachings are in the same field of endeavor. Specifically, properties of rolling resistance and/or reduced heat buildup reflect tire treads. One of ordinary skill in the art

b) The applicants further equate EZAWA to NAKAMURA and states that EZAWA teaches silicon containing rubber.

First glance at the examples of EZAWA, and the rubbers utilized include SBR and BR. Where did the applicant get the silicon rubber from? Rubbers of EZAWA are further described in paragraph [0020] of the prior art and there is no silicon rubber listed.

c) Applicants further argued that EZAWA appears to be silent with respect to tire, tread band and elastomeric composition comprising combination of zinc salt of a carboxylic acid and fatty acid amide within claimed concentrations.

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The prior art of EZAWA clearly teaches tire tread and therefore by virtue the composition is elastomeric. EZAWA may not specifically indicate the term "band" however, they are considered to be one and the same. Tire treads are in many companies disposed on a band, which is then wrapped around tire and vulcanized. Since the prior art of EZAWA utilizes term "tire tread" the prior art of EZAWA teaches the entire component.

So now that it is established that the EZAWA alone teaches an article, the composition of EZAWA lacks fatty acid salt. The prior art of NAKAMURA is relied to provide the above limitation. The prior art of NAKAMURA clearly indicates in col. 2 (top) that addition of fatty acid salt further improves in heat buildup and abrasion resistance of the composition, which properties are important to tread of the tire. This improvement is achieved since salt of fatty acid improves the dispersion of silica within elastomeric matrix. Such is further implied in the col. 1 of NAKAMURA. The reasons above are more than enough to find sufficient motivation to add salt of fatty acid into another rubber composition comprising silica filler.

The amounts – although the applicants have amended the claims to recite the amount of zinc salt of carboxylic acid from 0.1-15 phr to 1-15 phr, this amendment does not overcome teachings of EZAWA and NAKAMURA. The amounts disclosed in NAKAMURA include 3 pbw in examples and 0.1-15 pbw in the specification (col. 14). The amount of the salt of carboxylic acid is therefore taught by the prior art disclosures. In the office action the examiner utilized amount from the examples disclosed in EZAWA, however the applicants when making amendment should be familiar with entire disclosure of the prior art not just the part utilized by the examiner at that time.

“[A]nalysis [of whether the subject matter of claim would have been obvious] need no seek out precise teachings directed to the specific subject matter of the challenged claim, for a

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court to take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR Int’l v. Teleflex, Inc.* 127 S. Ct 1727, 1740-1741, 82 USPQ2d 1385, 1396 (2007) (quoting *In re Kahn*, 441, F.3d 977, 988, 78 USPQ2d 1329, 1336-37 (Fed. Cir. 2006)). See *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patric Co.*, 464 F.3d 1356, 1361, 80 USPQ2d 1641, 1645 (Fed. Cir 2006) (“The motivation need not be found in the references sought to be combined, but may be found in any number of sources, including common knowledge, the prior art as a whole, or the nature of the problem itself.”); *In re Bozek*, 416 F.2d 1385, 1390, 163 USPQ 545, 549 (CCPA 1969)(“Having established that this knowledge was in the art, the examiner could then properly rely, as put forth by the solicitor, on a conclusion of obviousness ‘from common knowledge and common sense of the person of ordinary skill in the art without any specific hint or suggestion in a particular reference.’”); *In re Hoeschelle*, 406 F.2d 1403, 1406-407, 160 USPQ 809, 811-12 (CCPA 1969) (“[I]t is proper to take into account not only specific teachings of the references but also the inference which one skilled in the art would reasonable be expected to draw therefrom ...”). The analysis supporting obviousness, however, should be made explicit and should “identify reason that would have prompted a person of ordinary skill in the relevant field to combine elements” in manner claimed. *KSR*, 127 S. Ct. at 1739, 82 USPQ2d at 1396.

In view of the above, the ability for the salt of carboxylic acid to disperse the silica filler has been established and it is expected to do the same in other rubber compositions utilizing silica as reinforcing filler. Improvement in properties crucial to performance of the tire tread will also be evident in compositions in which silica dispersion is improved.

As for the improper hindsight accusations – applicants’ arguments that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). As it was mentioned above, the ability of the salt of fatty acid to disperse the silica is already known.

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The applicants further bolded terms “as a whole” and "lead away" without an argument. Since the references were considered as a whole, the examiner is sure what the applicants are trying to say by "leading away" so this argument, should be clarified by the applicants.

d) Applicants on page 21 of their response indicated that the prior art of EZAWA is concerned with dispersion of silica, which is different purpose than that of NAKAMURA.

Well, no. As it is more than clearly conveyed in the teachings of NAKAMURA, the properties of abrasion resistance and heat build-up are attributed to poor silica dispersion, because of strong adhesion between elastomers and silica, so in fact the prior art of NAKAMURA achieves the improvement of the properties through better dispersion of silica throughout polymeric matrix. So, dispersion is also a crucial component of the teachings of NAKAMURA. In EZAWA, the disclosed is fracture resistant, however if the applicants continue to read on, it says that this property is also achieved by improving dispersion of the silica. So, going back to taking teachings of the prior art as a whole, the examiner was not picking and choosing parts of the disclosure that would just happen to support examiner's position, but the entire purpose of the disclosure was considered.

e) The applicants once again note, that the prior art of NAKAMURA does not teach fatty acid amides (page 22 of the response).

Again, NAKAMURA is secondary art not primary. Fatty acid amides are taught in EZAWA.

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d) None of the references specifically disclose use of zinc salt of carboxylic acid.

Col. 14 of the prior art of NAKAMURA teaches preferred embodiments of the carboxylic acid salts. Granted, that the list is rather long, but it is referred to as preferred embodiment. The specific salts listed in col. 14 is zinc stearate and zinc oleate. Basically these are three carboxylic acid compounds: oleic acid, stearic acid and lauric acid, with different salts that include zinc. The amounts are listed also in col. 14. Therefore zinc salts of carboxylic acids are clearly suggested, taught or otherwise disclosed by the teachings of NAKAMURA. Why to use fatty acid salts - this topic has been more than adequately explained in paragraphs above.

e) The applicants indicated also that in case law of *Kerkhoven*, nowhere it is indicated that the combination is prima facie obvious.

It is examiner's position that the reasons for obviousness do not have to be explicitly cited in the teachings of EZAWA and NAKAMURA, as long as one of ordinary skill in the art will be able to arrive at a tire composition having well dispersed silica. One of ordinary skill in the art would see that from the teachings applied. The terms "cumulative" and "additive" are viewed as such.

The applicants further keep arguing the case law, that the teachings of EZAWA and NAKAMURA are used for different purpose.

Although EZAWA teaches improvement in fracture resistance and NAKAMURA teaches improvement in heat build up and abrasion resistance, they are both done one way - which is improving dispersion of silica throughout the elastomeric matrix. In fact, silica

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dispersion can further improve other properties such as tear resistance, tensile strength, wet traction (US 5,777,013) or hysteresis (US 5,665,812). Even reinforcement properties can be affected if silica or carbon black is allowed to aggregate (US 5,587,416). Bottom line is both disclosures have to achieve excellent dispersion. The properties will become an intrinsic part of the composition.

The prior art of AQUIRE has been withdrawn against instant claims. The examiner reviewed applicant's arguments and concluded that the amount of stearic acid salt in AQUIRE is low.

If the applicants feel that an interview can further advance prosecution of the application such is solicited. Also the examiner request that the applicant verify last name of one inventor, Mario Martin. The applicant signed declaration as Martini.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katarzyna Wyrozebski whose telephone number is (571) 272-1127. The examiner can normally be reached on Mon-Thurs 8:30 AM-2:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Katarzyna Wyrozebski/
Primary Examiner, Art Unit 1796
November 17, 2008